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EXAMINER	
DEAN, RAYMOND S	

ART UNIT	PAPER NUMBER
2684	

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/040,542	DAMNJANOVIC ET AL.	
	Examiner	Art Unit	
	Raymond S Dean	2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 March 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 85* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 85* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 March 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Examiner acknowledges the submission of new drawings therefore the objection to the drawings is withdrawn.

2. Applicant's arguments filed March 1, 2005 have been fully considered but they are not persuasive.

Examiner respectfully disagrees with applicants' assertion on Page 2, 3rd Paragraph of the Remarks "In rejecting, claim 1, Examiner erroneously asserts. ...." The first transmit power level of the mobile station on the first reverse link channel is, as asserted by Applicants', responsive to the collective power control commands of base stations in the active set, which comprises serving and non-serving base stations. The second transmit power level of the mobile station on the second reverse link channel is, as asserted by Applicants', also responsive to the collective power control commands of base stations in the active set. Since the collective power control commands of the base stations (serving and non-serving) control the transmit power of the mobile station on each of the reverse link channels there will be a serving base station that sends power control commands for controlling the transmit power of the mobile station on a first reverse link channel and a non-serving base station that sends power control commands for controlling the transmit power of said mobile station on a second reverse link channel.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 – 2, 5 – 9, 23 – 26, 32, 35 – 39, 57 – 58, 61 – 65, 78 – 79, and 82 are rejected under 35 U.S.C. 102(e) as being anticipated by Kumar et al. (US 6,434,367).

Regarding Claim 1, Kumar teaches a method of controlling the transmit power of a mobile terminal in a mobile communication system, comprising: varying a first transmit power level of the mobile station on a first reverse link channel responsive to power control commands from a serving base station (Column 5 lines 46 – 67, Column 6 lines 27 – 31, the reverse link channels comprise a plurality of channels, each base station (serving and non-serving) power controls said reverse link channels); and varying a second transmit power level of the mobile station on a second reverse link channel responsive to power control commands from at least one non-serving base station (Column 5 lines 46 – 67, Column 6 lines 27 – 31, the reverse link channels comprise a plurality of channels, each base station (serving and non-serving) power controls said reverse link channels).

Regarding Claims 2, 26, 58, 79, Kumar teaches all of the claimed limitations recited in Claims 1, 25, 57, and 78. Kumar further teaches wherein the first reverse link channel is a reverse rate control channel and the second reverse link channel is a reverse traffic channel (Column 6 lines 27 – 35, this is a CDMA2000 system that can support high speed data communication, the reverse link in said CDMA system will comprise the following types of channels: Pilot, Traffic, and Data, which can be broken down further into Pilot, MAC, ACK, and Data with said MAC channel supporting Data Rate Control channels).

Regarding Claims 5, 35, Kumar teaches all of the claimed limitations recited in Claims 1, 32. Kumar further teaches receiving power control commands from one or more non-serving base stations; and decreasing the second transmit power level if at least one of the non-serving base stations commands the mobile station to decrease its power level (Column 5 lines 46 – 67, Column 6 lines 27 - 31).

Regarding Claims 6, 36, Kumar teaches all of the claimed limitations recited in Claims 5, 35. Kumar further teaches increasing the second transmit power level if all of the non-serving base stations command the mobile station to increase its power level (Column 5 lines 46 – 67, Column 6 lines 27 - 31).

Regarding Claim 7, Kumar teaches all of the claimed limitations recited in Claim 5. Kumar further teaches varying a second transmit power level of the mobile station on a second reverse link channel responsive to power control commands from the serving base station (Column 5 lines 46 – 67, Column 6 lines 27 – 31).

Regarding Claim 8, Kumar teaches all of the claimed limitations recited in Claim 7. Kumar further teaches decreasing the transmit power level of the mobile station if the serving base station command the mobile station to decrease its transmit power (Column 5 lines 46 – 67, Column 6 lines 27 – 31).

Regarding Claim 9, Kumar teaches all of the claimed limitations recited in Claim 8. Kumar further teaches increasing the transmit power of the mobile station on the second reverse link channel if the serving base station and each non-serving base station commands the mobile station to increase its transmit power (Column 5 lines 46 – 67, Column 6 lines 27 – 31).

Regarding Claim 23, Kumar teaches all of the claimed limitations recited in Claim 1. Kumar further teaches wherein the first reverse link channel is a reverse pilot channel and the second reverse link channel is a reverse traffic channel (Column 6 lines 27 – 35, this is a CDMA2000 system that can support high speed data communication, the reverse link in said CDMA system will comprise the following types of channels: Pilot, Traffic, and Data, which can be broken down further into Pilot, MAC, ACK, and Data with said MAC channel supporting Data Rate Control channels).

Regarding Claim 24, Kumar teaches all of the claimed limitations recited in Claim 1. Kumar further teaches wherein the first reverse link channel is a reverse rate control channel and the second reverse link channel is a reverse pilot channel (Column 6 lines 27 – 35, this is a CDMA2000 system that can support high speed data communication, the reverse link in said CDMA system will comprise the following types of channels:

Pilot, Traffic, and Data, which can be broken down further into Pilot, MAC, ACK, and Data with said MAC channel supporting Data Rate Control channels).

Regarding Claim 25, Kumar teaches a method of controlling the transmit power of a mobile terminal by a base station in a mobile communication system, comprising: determining whether the base station is a serving base station for forward link communications (Column 5 lines 46 – 67, soft handoff is conducted thus there will be a determination of which base station is the serving base station); power controlling a first reverse link channel if the base station is the serving base station (Column 5 lines 46 – 67, Column 6 lines 27 – 31, the reverse link channels comprise a plurality of channels, each base station (serving and non-serving) power controls said reverse link channels); power controlling a second reverse link channel if the base station is not the serving base station (Column 5 lines 46 – 67, Column 6 lines 27 – 31, the reverse link channels comprise a plurality of channels, each base station (serving and non-serving) power controls said reverse link channels).

Regarding Claim 32, Kumar teaches a method of controlling the transmit power of a mobile terminal in a wireless communication system during a soft handoff wherein the active set for the mobile station includes two or more base stations (Column 5 lines 46 – 67, soft handoff is conducted thus there an active set of two or more base stations), the method comprising: selecting one of the base stations in the active set as the serving base station for forward link communications with the mobile terminal receiving power control commands from the serving base station and at least one non-serving base station in the active set (Column 5 lines 46 – 67); varying a first transmit

power level of the mobile station on a reverse rate control channel responsive to power control commands from a serving base station (Column 5 lines 46 – 67, Column 6 lines 27 – 35, the reverse link channels comprise a plurality of channels, each base station (serving and non-serving) power controls said reverse link channels, this is a CDMA2000 system that can support high speed data communication, the reverse link in said CDMA system will comprise the following types of channels: Pilot, Traffic, and Data, which can be broken down further into Pilot, MAC, ACK, and Data with said MAC channel supporting Data Rate Control channels); and varying a second transmit power level of the mobile station on a reverse traffic channel responsive to power control commands from at least one non-serving base station (Column 5 lines 46 – 67, Column 6 lines 27 – 35, the reverse link channels comprise a plurality of channels, each base station (serving and non-serving) power controls said reverse link channels, this is a CDMA2000 system that can support high speed data communication, the reverse link in said CDMA system will comprise the following types of channels: Pilot, Traffic, and Data, which can be broken down further into Pilot, MAC, ACK, and Data with said MAC channel supporting Data Rate Control channels).

Regarding Claim 37, Kumar teaches all of the claimed limitations recited in Claim 36. Kumar further teaches varying the transmit power level of the mobile station on the reverse traffic channel responsive to power control commands from the serving base station (Column 5 lines 46 – 67, Column 6 lines 27 – 35).

Regarding Claim 38, Kumar teaches all of the claimed limitations recited in Claim 37. Kumar further teaches decreasing the transmit power level of the mobile station on

the reverse traffic channel if the serving base station commands the mobile station to decrease its transmit power (Column 5 lines 46 – 67, Column 6 lines 27 – 35).

Regarding Claim 39, Kumar teaches all of the claimed limitations recited in Claim 38. Kumar further teaches increasing the transmit power of the mobile station on the reverse traffic channel if the serving base station and each non-serving base station commands the mobile station to increase its transmit power (Column 5 lines 46 – 67, Column 6 lines 27 – 35).

Regarding Claim 57, Kumar teaches a mobile station comprising a receiver to receive power control commands from a serving base station and at least one non-serving base station (Column 5 lines 46 – 67), the serving and non-serving base stations forming an active set for the mobile station power control logic to: vary a first transmit power level of the mobile station on a first reverse link channel responsive to power control commands from the serving base station (Column 5 lines 46 – 67, Column 6 lines 27 – 31, the reverse link channels comprise a plurality of channels, each base station (serving and non-serving) power controls said reverse link channels); vary a second transmit power level of the mobile station on a second reverse link channel responsive to power control commands from at least one non- serving base station (Column 5 lines 46 – 67, Column 6 lines 27 – 31, the reverse link channels comprise a plurality of channels, each base station (serving and non-serving) power controls said reverse link channels); and a transmitter to transmit signals on the first and second reverse link channels at the first and second transmit power levels respectively (Column 5 lines 46 – 67, Column 6 lines 27 – 31).

Regarding Claim 61, Kumar teaches all of the claimed limitations recited in Claim 57. Kumar further teaches wherein the power control logic decreases the second transmit power level if at least one of the non-serving base stations in the active set commands the mobile station to decrease its power level (Column 5 lines 46 – 67, Column 6 lines 27 - 31).

Regarding Claim 62, Kumar teaches all of the claimed limitations recited in Claim 61. Kumar further teaches wherein the power control logic increases the second transmit power level if all of the non-serving base stations in the active set command the mobile station to increase its power level (Column 5 lines 46 – 67, Column 6 lines 27 - 31).

Regarding Claim 63, Kumar teaches all of the claimed limitations recited in Claim 57. Kumar further teaches wherein the power control logic varies the transmit power level of the mobile station on the second reverse link channel responsive to power control commands from all the base stations in the active set for the mobile station, including the serving base station (Column 5 lines 46 – 67, Column 6 lines 27 – 31).

Regarding Claim 64, Kumar teaches all of the claimed limitations recited in Claim 57. Kumar further teaches wherein the power control logic decreases the second transmit power level if the serving base station or any one of the non-serving base stations commands the mobile station to decrease its transmit power on the reverse traffic channel (Column 5 lines 46 – 67, Column 6 lines 27 – 31).

Regarding Claim 65, Kumar teaches all of the claimed limitations recited in Claim 57. Kumar further teaches wherein the power control logic increases the second

transmit power level if all of the base stations in its active set command the mobile station to increase its transmit power on the reverse traffic channel (Column 5 lines 46 – 67, Column 6 lines 27 - 31).

Regarding Claim 78, Kumar teaches a base station for a wireless communication network, comprising: a receiver to receive signals from a mobile station on first and second reverse link channels at first and second received power levels respectively (Column 5 lines 46 – 67, Column 6 lines 27 – 35, the reverse link channels comprise a plurality of channels) power control logic to: determine whether the base station is a serving base station for forward link communications (Column 5 lines 46 – 67, soft handoff is conducted thus there will be a determination of which base station is the serving base station); generate power control commands to power control a first reverse link channel if the base station is the serving base station (Column 5 lines 46 – 67, Column 6 lines 27 – 31, the reverse link channels comprise a plurality of channels, each base station (serving and non-serving) power controls said reverse link channels); generate power control commands to power control a second reverse link channel if the base station is a non-serving base station (Column 5 lines 46 – 67, Column 6 lines 27 – 31, the reverse link channels comprise a plurality of channels, each base station (serving and non-serving) power controls said reverse link channels); and a transmitter to transmit the power control commands to the mobile station (Column 5 lines 46 – 67);

Regarding Claim 82, Kumar teaches all of the claimed limitations recited in Claim 78. Kumar further teaches generating a first power control command to power control the reverse pilot channel and a second power control command to power control the

reverse rate control channel if the base determines that it is the serving base station (Column 5 lines 46 – 67, Column 6 lines 27 – 35, the reverse link channels comprise a plurality of channels, each base station (serving and non-serving) power controls said reverse link channels, this is a CDMA2000 system that can support high speed data communication, the reverse link in said CDMA system will comprise the following types of channels: Pilot, Traffic, and Data, which can be broken down further into Pilot, MAC, ACK, and Data with said MAC channel supporting Data Rate Control channels).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 3 – 4, 10 – 17, 19 – 22, 27 – 30, 33 – 34, 40 – 51, 53 – 56, 59 – 60, 66 – 72, 74 – 77, 80 – 81, and 83 – 84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar et al. (US 6,434,367) in view of Chen et al. (US 2002/0142791).

Regarding Claims 3, 27, 33, 80, Kumar teaches all of the claimed limitations recited in Claims 2, 26, 32, and 79. Kumar further teaches wherein the transmit power level of the mobile station on the reverse pilot channel is varied responsive to the power

control commands from the serving base station (Column 5 lines 46 – 67, Column 6 lines 27 – 31).

Kumar does not teach wherein the gain of the reverse rate control channel is fixed relative to a reverse pilot channel.

Chen teaches wherein the gain of the reverse rate control channel is fixed relative to a reverse pilot channel (Section 0033 lines 20 – 26, the power level of the data rate channel and the traffic channel will be selected based on the gain, which is fixed relative to the reverse pilot channel power level).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the channel gain taught by Chen in the CDMA system of Kumar for the purpose of setting the data rate channel power level as taught by Chen.

Regarding Claims 4, 29, 34, 83, Kumar teaches all of the claimed limitations recited in Claims 2, 26, 32, and 79. Kumar further teaches wherein the transmit power level of the mobile station on the reverse pilot channel is varied responsive to the power control commands from the at least one non-serving base station (Column 5 lines 46 – 67, Column 6 lines 27 – 31).

Kumar does not teach wherein the gain of the reverse traffic channel is fixed relative to a reverse pilot channel.

Chen teaches wherein the gain of the reverse traffic channel is fixed relative to a reverse pilot channel (Section 0033 lines 20 – 26, the power level of the data rate channel and the traffic channel will be selected based on the gain, which is fixed relative to the reverse pilot channel power level).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the channel gain taught by Chen in the CDMA system of Kumar for the purpose of setting the traffic channel power level as taught by Chen.

Regarding Claims 10, 66, Kumar teaches all of the claimed limitations recited in Claims 1, 57. Kumar does not teach computing a first channel gain of one of the first and second reverse link channels relative to a third reverse link channel.

Chen teaches computing a first channel gain of one of the first and second reverse link channels relative to a third reverse link channel (Section 0033 lines 20 – 26, the third reverse link channel is the pilot channel).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the channel gain taught by Chen in the CDMA system of Kumar for the purpose of setting the traffic channel power level as taught by Chen.

Regarding Claims 11, 67, Kumar in view of Chen teaches all of the claimed limitations recited in Claims 10, 66. Chen further teaches determining if the first channel gain meets a predetermined criterion; and varying the transmit power level of the mobile station on the first reverse link channel if the first channel gain meets the predetermined criterion (Section 0033 lines 23 – 26, if the gain meets a particular value a particular power level will be set for the reverse channel).

Regarding Claims 12, 68, Kumar in view of Chen teaches all of the claimed limitations recited in Claims 11, 67. Kumar further teaches varying the first transmit power level of the mobile station on the first reverse link channel responsive to power control commands from at least one non-serving base station (Column 5 lines 46 – 67,

Column 6 lines 27 - 31). Chen further teaches varying the first transmit power level of the mobile station on the first reverse link channel if the first channel gain does not meet the predetermined criterion (Section 0033 lines 23 – 26, if the gain meets a particular value a particular power level will be set for the reverse channel, if said gain does not meet said value the reverse channel will be set at a power level different than said particular power level).

Regarding Claims 13, 71, Kumar in view of Chen teaches all of the claimed limitations recited in Claims 10, 66. Chen further teaches determining if the first channel gain meets a predetermined criterion; and varying the transmit power level of the mobile station on the second reverse link channel if the first channel gain meets the predetermined criterion (Section 0033 lines 20 – 26, if the gain meets a particular value a particular power level will be set for the reverse channel).

Regarding Claims 14, 72, Kumar in view of Chen teaches all of the claimed limitations recited in Claims 13, 71. Kumar further teaches varying the second transmit power level of the mobile station on the second reverse link channel responsive to power control commands from the serving base station (Column 5 lines 46 – 67, Column 6 lines 27 - 31). Chen further teaches varying the second transmit power level of the mobile station on the second reverse link channel if the first channel gain does not meet the predetermined criterion (Section 0033 lines 23 – 26, if the gain meets a particular value a particular power level will be set for the reverse channel, if said gain does not meet said value the reverse channel will be set at a power level different than said particular power level).

Regarding Claims 15, 69, Kumar in view of Chen teaches all of the claimed limitations recited in Claims 10, 67. Chen further teaches computing a second channel gain of one of the first and second reverse link channels relative to a third reverse link channel (Section 0033 lines 20 – 26, the third reverse link channel is the pilot channel, when a particular data rate is selected a corresponding channel gain will be computed thus if a different data rate is selected another corresponding channel gain will be computed).

Regarding Claims 16, 70, Kumar in view of Chen teaches all of the claimed limitations recited in Claims 10, 69. Chen further teaches determining if the second channel gain meets a first predetermined criterion (Section 0033 lines 23 – 26, if the gain meets a particular value a particular power level will be set for the reverse channel); determining if the second channel gain meets a second predetermined criterion (Section 0033 lines 23 – 26, the gain will need to meet a minimum value in order for the reverse channel to be active); and varying the transmit power level of the mobile station on the first reverse link channel if the first and second channel gains meet the first and second predetermined criterion respectively (Section 0033 lines 23 – 26, if the gain meets a particular value that is above the minimum value a particular power level will be set for the reverse channel).

Regarding Claim 17, Kumar in view of Chen teaches all of the claimed limitations recited in Claim 16. Kumar further teaches varying the first transmit power level of the mobile station on the first reverse link channel responsive to power control commands from at least one non-serving base station (Column 5 lines 46 – 67, Column 6 lines 27 -

31). Chen further teaches varying the first transmit power level of the mobile station on the first reverse link channel if the first channel gain does not meet the first predetermined criterion (Section 0033 lines 23 – 26, if the gain meets a particular value a particular power level will be set for the reverse channel, if said gain does not meet said value the reverse channel will be set at a power level different than said particular power level).

Regarding Claims 19, 53, 74, Kumar teaches all of the claimed limitations recited in Claims 2, 32, 58. Kumar further teaches a primary pilot channel and at least one secondary pilot channel (Column 5 lines 46 – 67, the mobile is in soft handoff, which means that there will be a primary serving base station in communication with said mobile station and a secondary base station also in communication with said mobile station thus there will be a primary and secondary pilot channel).

Kumar does not teach wherein the gain of the reverse traffic channel is fixed relative to the primary pilot channel.

Chen teaches wherein the gain of the reverse traffic channel is fixed relative to the pilot channel (Section 0033 lines 20 – 26, the power level of the data rate channel and the traffic channel will be selected based on the gain, which is fixed relative to the reverse pilot channel power level).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the channel gain taught by Chen in the CDMA system of Kumar for the purpose of setting the traffic channel power level as taught by Chen.

Regarding Claims 20, 54, 75, Kumar in view of Chen teaches all of the claimed limitations recited in Claims 19, 53, 74. Kumar further teaches the sum of the transmit power on all reverse link pilot channels (Column 5 lines 46 – 67, Column 6 lines 27 – 31, the mobile is in soft handoff, which means that there will be a primary serving base station in communication with said mobile station and a secondary base station(s) also in communication with said mobile station thus there will be a primary and secondary pilot channel(s), the power of said pilot channels are controlled by the active set of base stations, in order for said pilot channels to be properly power controlled said pilot channels must be summed to be taken as a whole). Chen further teaches wherein the gain of the reverse rate control channel is fixed relative to the pilot channel (Section 0033 lines 20 – 26, the power level of the data rate channel and the traffic channel will be selected based on the gain, which is fixed relative to the reverse pilot channel power level).

Regarding Claims 21, 55, 76, Kumar in view of Chen teaches all of the claimed limitations recited in Claims 20, 54, 75. Kumar further teaches wherein the mobile station varies its transmit power on the primary pilot channel responsive to power control commands form at least one non-serving base station (Column 5 lines 46 – 67).

Regarding Claims 22, 56, 77, Kumar in view of Chen teaches all of the claimed limitations recited in Claims 21, 55, 76. Kumar further teaches wherein the mobile station varies its transmit power on at least one secondary pilot channel responsive to power control commands from the serving base station such that the total transmit power on all reverse link pilot channels remains within predetermined limits (Column 5

lines 46 – 67, Column 6 lines 27 – 31, in order for said pilot channels to be properly power controlled said pilot channels must be summed to be taken as a whole, the total transmit power on the reverse link pilot channels will remain within predetermined limits so that there will be no interference with the other reveres link pilot signals from the other mobile stations).

Regarding Claims 28, 81, Kumar in view of Chen teaches all of the claimed limitations recited in Claims 27, 80. Kumar further teaches power controlling the reverse pilot channel if the base station determines that it is the serving base station (Column 5 lines 46 – 67, Column 6 lines 27 – 31, the reverse link channels comprise a plurality of channels, each base station (serving and non-serving) power controls said reverse link channels).

Regarding Claim 30, 84, Kumar in view of Chen teaches all of the claimed limitations recited in Claim 29, 83. Kumar further teaches power controlling the reverse pilot channel if the base station determines that it is the non-serving base station (Column 5 lines 46 – 67, Column 6 lines 27 – 31, the reverse link channels comprise a plurality of channels, each base station (serving and non-serving) power controls said reverse link channels).

Regarding Claim 40, Kumar in view of Chen teaches all of the claimed limitations recited in Claim 33. Chen further teaches computing a first channel gain of the reverse traffic channel relative to the reverse pilot channel (Section 0033 lines 20 – 26).

Regarding Claim 41, Kumar in view of Chen teaches all of the claimed limitations recited in Claim 40. Chen further teaches comparing the first channel gain to a

predetermined minimum gain; and varying the transmit power level of the mobile station on the reverse rate control channel if the first channel gain is not less than the predetermined minimum gain (Section 0033 lines 20 – 26, if the gain meets a particular value a particular power level will be set for the reverse channel, said value can be greater than a minimum gain value).

Regarding Claim 42, Kumar in view of Chen teaches all of the claimed limitations recited in Claim 41. Kumar further teaches varying the transmit power level of the mobile station on the reverse rate control channel responsive to power control commands from at least one non-serving base station (Column 5 lines 46 – 67, Column 6 lines 27 - 35). Chen further teaches varying the transmit power level of the mobile station on the reverse rate control channel if the first channel gain is less than the predetermined minimum gain (Section 0033 lines 20 – 26, if the gain does not meet a particular value a different power level will be set, said value can be less than a minimum gain value).

Regarding Claim 43, Kumar in view of Chen teaches all of the claimed limitations recited in Claim 41. Chen further teaches computing a second channel gain of the reverse rate control channel relative to the reverse pilot channel (Section 0033 lines 20 – 26, when a particular data rate is selected a corresponding channel gain will be computed thus if a different data rate is selected another corresponding channel gain will be computed).

Regarding Claim 44, Kumar in view of Chen teaches all of the claimed limitations recited in Claim 43. Chen further teaches comparing the second channel gain to a

normal gain; varying the transmit power level of the mobile station on the reverse pilot channel and the reverse rate control channel if the second channel gain is equal to the normal gain (Section 0033 lines 20 – 26, a particular power level will be set if the gain meets a particular gain value, said gain value can be a normal gain value); and varying the transmit power level of the mobile station on the reverse rate control channel if the second channel gain is greater than the normal gain (Section 0033 lines 20 – 26, another power level will be set if the gain is greater than said particular gain value).

Regarding Claim 45, Kumar in view of Chen teaches all of the claimed limitations recited in Claim 40. Chen further teaches comparing the channel gain to a predetermined maximum gain; and varying the transmit power level of the mobile station on the reverse traffic channel if the channel gain is more than the predetermined maximum gain (Section 0033 lines 20 – 26, a particular power level will be set if the gain is greater than a particular gain value, said gain value can be a maximum gain value).

Regarding Claim 46, Kumar in view of Chen teaches all of the claimed limitations recited in Claim 45. Kumar further teaches varying the transmit power level of the mobile station on the reverse traffic channel responsive to power control commands from the serving base station (Column 5 lines 46 – 67, Column 6 lines 27 - 35). Chen further teaches varying the transmit power level of the mobile station on the reverse traffic channel if the channel gain is greater than the predetermined maximum gain (Section 0033 lines 20 – 26, if the gain is greater than a particular value a different power level will be set, said value can be a maximum gain value).

Regarding Claim 47, Kumar in view of Chen teaches all of the claimed limitations recited in Claim 34. Chen further teaches computing a gain ratio of the reverse rate control channel to the reverse pilot channel (Section 0033 lines 20 – 26).

Regarding Claim 48, Kumar in view of Chen teaches all of the claimed limitations recited in Claim 47. Chen further teaches comparing the channel gain to a predetermined maximum gain; and varying the transmit power level of the mobile station on the reverse rate control channel if the channel gain is not greater than the predetermined maximum gain (Section 0033 lines 20 – 26, a particular power level will be set if the gain is not greater than a particular gain value, said gain value can be a maximum gain value).

Regarding Claim 49, Kumar in view of Chen teaches all of the claimed limitations recited in Claim 48. Kumar further teaches varying the transmit power level of the mobile station on the reverse rate control channel responsive to power control commands from at least one non-serving base station (Column 5 lines 46 – 67, Column 6 lines 27 - 35). Chen further teaches varying the transmit power level of the mobile station on the reverse rate control channel if the channel gain is greater than the predetermined maximum gain (Section 0033 lines 20 – 26, a particular power level will be set if the gain is greater than a particular gain value, said gain value can be a maximum gain value).

Regarding Claim 50, Kumar in view of Chen teaches all of the claimed limitations recited in Claim 49. Chen further teaches comparing the channel gain to a predetermined minimum gain; and varying the transmit power level of the mobile station

on the reverse traffic channel if the channel gain is not less than the predetermined minimum gain (Section 0033 lines 20 – 26, a particular power level will be set if the gain is not less than a particular gain value, said gain value can be a minimum gain value).

Regarding Claim 51, Kumar in view of Chen teaches all of the claimed limitations recited in Claim 50. Kumar further teaches varying the transmit power level of the mobile station on the reverse traffic channel responsive to power control commands from the serving base station (Column 5 lines 46 – 67, Column 6 lines 27 - 35). Chen further teaches varying the transmit power level of the mobile station on the reverse traffic channel if the channel gain is less than the predetermined minimum gain (Section 0033 lines 20 – 26, if the gain is less than a particular value a different power level will be set, said value can be a minimum gain value).

Regarding Claim 59, Kumar teaches all of the claimed limitations recited in Claim 58. Kumar further teaches wherein the power control logic varies the transmit power level of the mobile station on the reverse pilot channel responsive to the power control commands from the serving base station (Column 5 lines 46 – 67, Column 6 lines 27 – 31).

Kumar does not teach wherein the gain of the reverse rate control channel is fixed relative to a reverse pilot channel.

Chen teaches wherein the gain of the reverse rate control channel is fixed relative to a reverse pilot channel (Section 0033 lines 20 – 26, the power level of the data rate channel and the traffic channel will be selected based on the gain, which is fixed relative to the reverse pilot channel power level).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the channel gain taught by Chen in the CDMA system of Kumar for the purpose of setting the data rate channel power level as taught by Chen.

Regarding Claim 60, Kumar teaches all of the claimed limitations recited in Claim 58. Kumar further teaches wherein the power control logic varies the transmit power level of the mobile station on the reverse pilot channel is responsive to the power control commands from the at least one non-serving base station (Column 5 lines 46 – 67, Column 6 lines 27 – 31).

Kumar does not teach wherein the gain of the reverse traffic channel is fixed relative to a reverse pilot channel.

Chen teaches wherein the gain of the reverse traffic channel is fixed relative to a reverse pilot channel (Section 0033 lines 20 – 26, the power level of the data rate channel and the traffic channel will be selected based on the gain, which is fixed relative to the reverse pilot channel power level).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the channel gain taught by Chen in the CDMA system of Kumar for the purpose of setting the traffic channel power level as taught by Chen.

7. Claims 18, 31, 52, 73, and 85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar et al. (US 6,434,367) in view of Chen et al. (US 2002/0165004).

Regarding Claims 18, 73, Kumar teaches all of the claimed limitations recited in Claims 1, 57. Kumar further teaches varying a first transmit power level of the mobile station on the first reverse link channel responsive to power control commands from at least one non-serving base station (Column 5 lines 46 – 67, Column 6 lines 27 - 31).

Kumar does not teach varying a first transmit power level of the mobile station on the first reverse link channel responsive to power control commands from at least one non-serving base station if the mobile station is in a discontinuous transmission mode.

Chen teaches varying a transmit power level of the mobile station on a reverse link channel responsive to power control commands from a base station if the mobile station is in a discontinuous transmission mode (Section 0034 lines 1 – 7, Section 0108 lines 1 – 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the discontinuous transmission mode taught in Chen in the mobile station of Kumar for the purpose of creating a mobile station that does not transmit continuously thus enabling said mobile station to be more power efficient as taught by Chen.

Regarding Claim 31, 85, Kumar teaches all of the claimed limitations recited in Claim 25, 78. Kumar further teaches power controlling the reverse pilot channel by a non-serving base station if the received power on the reverse pilot channel is above a predetermined threshold at the non-serving base station (Column 5 lines 46 – 67, Column 6 lines 27 – 31, the reverse link channels comprise a plurality of channels, each base station (serving and non-serving) power controls said reverse link channels).

Kumar does not teach power controlling the reverse pilot channel by a non-serving base station if the mobile station is in a discontinuous transmission mode.

Chen teaches power controlling the reverse pilot channel by a base station if mobile station is in a discontinuous transmission mode (Section 0034 lines 1 – 7, Section 0108 lines 1 – 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the discontinuous transmission mode taught in Chen in the mobile station of Kumar for the purpose of creating a mobile station that does not transmit continuously thus enabling said mobile station to be more power efficient as taught by Chen.

Regarding Claim 52, Kumar teaches all of the claimed limitations recited in Claim 32. Kumar further teaches varying a transmit power level of the mobile station on the first reverse pilot channel responsive to power control commands from at least one non-serving base station (Column 5 lines 46 – 67, Column 6 lines 27 - 35).

Kumar does not teach varying a first transmit power level of the mobile station on the first reverse pilot channel responsive to power control commands from at least one non-serving base station if the mobile station is in a discontinuous transmission mode.

Chen teaches varying a transmit power level of the mobile station on a reverse link channel responsive to power control commands from a base station if the mobile station is in a discontinuous transmission mode (Section 0034 lines 1 – 7, Section 0108 lines 1 – 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the discontinuous transmission mode taught in Chen in the mobile station of Kumar for the purpose of creating a mobile station that does not transmit continuously thus enabling said mobile station to be more power efficient as taught by Chen.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cheng et al. (US 2002/0105974).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S Dean whose telephone number is 571-272-7877. The examiner can normally be reached on 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay A Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Raymond S. Dean
April 14, 2005

NAY MAUNG
SUPERVISORY PATENT EXAMINER